JC09 Rec'd PCT/PTO 18 OCT 2005,

SEQUENCE LISTING

<110> Tan, Carina Howard, Andrew D. Sano, Hideki

<120> RHESUS MONKEY BOMBESIN SUBTYPE-3
(BRS-3), NUCLEOTIDES ENCODING SAME, AND USES THEREOF

<130> 21198P

<150> PCT/US2004/011473

<151> 2004-04-14

<150> 60/463,776

<151> 2003-04-18

<160> 22

<170> FastSEQ for Windows Version 4.0

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<211> 1197

<212> DNA

<213> Macaca mulatta

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ctgaagactt gtataaaagc tggctgcgtc tggatcgtgt ctatgatatt tgctctacct 540 gaggctatat tttcaaatgt atattcttt cgagatcca acaaaaatgt gacatttgaa 600 tcgtgtacct cttatcctgt ctctaagaag ctcttgcaag aaatacattc tctgctgtgc 660 ttcttagtgt tctacattat tccactctc attatctcg tctattattc tttgattgct 720 aggacccttt ataaaagcac cctgaacata cctactgagg aacaaggcca tgcccgtaag 780 cagattgaat cccggaagag aattgccaga acggtattgg tgttggtggc tctgtttgcc 840 ctctgctggt tgccaaatca cctcctgtac ctctaccatt cattcacttc tcaaacctat 900 gtagacccct ctgccatgca tttcatttc accatttct ctcgggttct ggcttcagc 960 aattcttgcg taaacccct tgctctctac tggctgagc aaaccttcca gaagcattt 1020 aaagctcagt tgttctgtt caaggcagag cagcctgagc ctcctgttgc tgacacctct 1080 cttaccacc tggctgtat gggaagggtc ccgggcactg ggaacatgca gatgtctga 1140 attagtgtga cctcgttccc tgggtgtagt gtgaagcagg cagaggatag agtctag

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20 25 30

Lys Gly Arg Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys Ala 35 40 45

Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly Asn
50 55 60

Ala Ile Leu Ile Lys Val Phe Phe Lys Thr Lys Ser Met Gln Thr Val 65 70 75 80

Pro Asn Ile Phe Ile Thr Ser Leu Ala Phe Gly Asp Leu Leu Leu
85 90 95

Leu Thr Cys Val Pro Val Asp Ala Thr His Tyr Leu Ala Glu Gly Trp

100 105 110

Leu Phe Gly Arg Ile Gly Cys Lys Val Leu Ser Phe Ile Arg Leu Thr
115 120 125

Ser Val Gly Val Ser Val Phe Thr Leu Thr Ile Leu Ser Ala Asp Arg 130 135 140

Tyr Lys Ala Val Val Lys Pro Leu Glu Arg Gln Pro Ser Asn Ala Ile Leu Lys Thr Cys Ile Lys Ala Gly Cys Val Trp Ile Val Ser Met Ile Phe Ala Leu Pro Glu Ala Ile Phe Ser Asn Val Tyr Ser Phe Arg Asp Pro Asn Lys Asn Val Thr Phe Glu Ser Cys Thr Ser Tyr Pro Val Ser Lys Lys Leu Leu Gln Glu Ile His Ser Leu Leu Cys Phe Leu Val Phe Tyr Ile Ile Pro Leu Ser Ile Ile Ser Val Tyr Tyr Ser Leu Ile Ala Arg Thr Leu Tyr Lys Ser Thr Leu Asn Ile Pro Thr Glu Glu Gln Gly His Ala Arg Lys Gln Ile Glu Ser Arg Lys Arg Ile Ala Arg Thr Val Leu Val Leu Val Ala Leu Phe Ala Leu Cys Trp Leu Pro Asn His Leu Leu Tyr Leu Tyr His Ser Phe Thr Ser Gln Thr Tyr Val Asp Pro Ser Ala Met His Phe Ile Phe Thr Ile Phe Ser Arg Val Leu Ala Phe Ser Asn Ser Cys Val Asn Pro Phe Ala Leu Tyr Trp Leu Ser Lys Thr Phe Gln Lys His Phe Lys Ala Gln Leu Phe Cys Cys Lys Ala Glu Gln Pro Glu Pro Pro Val Ala Asp Thr Ser Leu Thr Thr Leu Ala Val Met Gly Arg Val Pro Gly Thr Gly Asn Met Gln Met Ser Glu Ile Ser Val Thr Ser Phe Pro Gly Cys Ser Val Lys Gln Ala Glu Asp Arg Val

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| cagcagaggg caaacagag | 19 |
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<223> PCR Primer

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tctccaggaa tagaagcatt gtgtgccatc tatattactt atgctgtgat catttcagtg 180
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aaggtgctct ctttcatccg gctcacttct gttggtgtgt cagtgttcac attaacaatt 420
ctcagcgctg acagatacaa ggcagttgtg aagccacttg agcgacagcc ctccaatgcc 480
atcctgaaga cttgtgtaaa agctggctgc gtctggatcg tgtctatgat atttgctcta 540
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gctaggaccc tttacaaaag caccctgaac atacctactg aggaacaaag ccatgcccgt 780
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<212> DNA
<213> Rattus Norvrgicus
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<212> DNA

<213> Artificial Sequence

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<210> 20

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<212> PRT

<213> Homo Sapiens

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Thr Asn Asp Thr Glu Ser Ser Ser Val Val Ser Asn Asp Asn Thr
20 25 30

Asn Lys Gly Trp Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys
35 40 45

Ala Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly
50 60

Asn Ala Ile Leu Ile Lys Val Phe Phe Lys Thr Lys Ser Met Gln Thr 65 70 75 80

Val Pro Asn Ile Phe Ile Thr Ser Leu Ala Phe Gly Asp Leu Leu Leu
85 90 95

Leu Leu Thr Cys Val Pro Val Asp Ala Thr His Tyr Leu Ala Glu Gly
100 105 110

Trp Leu Phe Gly Arg Ile Gly Cys Lys Val Leu Ser Phe Ile Arg Leu 115 120 125 Thr Ser Val Gly Val Ser Val Phe Thr Leu Thr Ile Leu Ser Ala Asp Arg Tyr Lys Ala Val Val Lys Pro Leu Glu Arg Gln Pro Ser Asn Ala Ile Leu Lys Thr Cys Val Lys Ala Gly Cys Val Trp Ile Val Ser Met Ile Phe Ala Leu Pro Glu Ala Ile Phe Ser Asn Val Tyr Thr Phe Arg Asp Pro Asn Lys Asn Met Thr Phe Glu Ser Cys Thr Ser Tyr Pro Val Ser Lys Lys Leu Gln Glu Ile His Ser Leu Cys Phe Leu Val Phe Tyr Ile Ile Pro Leu Ser Ile Ile Ser Val Tyr Tyr Ser Leu Ile Ala Arg Thr Leu Tyr Lys Ser Thr Leu Asn Ile Pro Thr Glu Glu Gln Ser His Ala Arg Lys Gln Ile Glu Ser Arg Lys Arg Ile Ala Arg Thr Val Leu Val Leu Val Ala Leu Phe Ala Leu Cys Trp Leu Pro Asn His Leu Leu Tyr Leu Tyr His Ser Phe Thr Ser Gln Thr Tyr Val Asp Pro Ser Ala Met His Phe Ile Phe Thr Ile Phe Ser Arg Val Leu Ala Phe Ser Asn Ser Cys Val Asn Pro Phe Ala Leu Tyr Trp Leu Ser Lys Ser Phe Gln Lys His Phe Lys Ala Gln Leu Phe Cys Cys Lys Ala Glu Arg Pro Glu Pro Pro Val Ala Asp Thr Ser Leu Thr Thr Leu Ala Val Met Gly Thr Val Pro Gly Thr Gly Ser Ile Gln Met Ser Glu Ile Ser Val Thr Ser Phe Thr Gly Cys Ser Val Lys Gln Ala Glu Asp Arg Phe

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230

245

250

Ala Arg Thr Leu Tyr Lys Ser Thr Leu Asn Ile Pro Thr Glu Glu Gln

235

255

Ser His Ala Arg Lys Gln Ile Glu Ser Arg Lys Arg Ile Ala Lys Thr 260 265 Val Leu Val Leu Val Ala Leu Phe Ala Leu Cys Trp Leu Pro Asn His 280 Leu Leu Tyr Leu Tyr His Ser Phe Thr Tyr Glu Ser Tyr Ala Glu Pro 290 295 300 Ser Asp Val Pro Phe Val Val Thr Ile Phe Ser Arg Val Leu Ala Phe 310 315 Ser Asn Ser Cys Val Asn Pro Phe Ala Leu Tyr Trp Leu Ser Lys Thr 330 325 Phe Gln Lys His Phe Lys Ala Gln Leu Cys Cys Phe Lys Ala Glu Gln 350 340 345 Pro Glu Pro Pro Leu Gly Asp Thr Pro Leu Asn Asn Leu Thr Val Met 360 Gly Arg Val Pro Ala Thr Gly Ser Ala His Val Ser Glu Ile Ser Val 370 375 380 Thr Leu Phe Ser Gly Ser Thr Ala Lys Lys Gly Glu Asp Lys Val 385 390 395

<210> 22

<211> 399

<212> PRT

<213> Artificial Sequence

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<223> BRS-3 consensus sequence

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Met Ala Gln Arg Gln Pro His Ser Pro Asn Gln Thr Leu Ile Ser Ile

1 5 10 15

Thr Asn Asp Thr Glu Ser Ser Ser Val Val Ser Asn Asp Asn Thr
20 25 30

Asn Lys Gly Trp Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys
35 40 45

Ala Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly
50 55 60

| Asn | Ala | TIE | ьeu | ire | гÀг | vai | Pne | Pne | гаг | Inr | ьys | ser | Met | GIN | Thr |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Val | Pro | Asn | Ile | Phe | Ile | Thr | Ser | Leu | Ala | Phe | Gly | Asp | Leu | Leu | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Leu | Thr | Cys | Val | Pro | Val | Asp | Ala | Thr | His | Tyr | Leu | Ala | Glu | Gly |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Trp | Leu | Phe | Gly | Arg | Ile | Gly | Cys | Lys | Val | Leu | Ser | Phe | Ile | Arg | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Thr | Ser | Val | Gly | Val | Ser | Val | Phe | Thr | Leu | Thr | Ile | Leu | Ser | Ala | Asp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Tyr | Lys | Ala | Val | Val | Lys | Pro | Leu | Glu | Arg | Gln | Pro | Ser | Asn | Ala |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Ile | Leu | Lys | Thr | Cys | Ile | Lys | Ala | Gly | Cys | Val | Trp | Ile | Val | Ser | Met |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Ile | Phe | Ala | Leu | Pro | Glu | Ala | Ile | Phe | Ser | Asn | Val | Tyr | Thr | Phe | Arg |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Pro | Asn | Lys | Asn | Val | Thr | Phe | Glu | Ser | Cys | Thr | Ser | Tyr | Pro | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ser | Lys | Lys | Leu | Leu | Gln | Glu | Ile | His | Ser | Leu | Leu | Cys | Phe | Leu | Val |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Phe | Tyr | Ile | Ile | Pro | Leu | Ser | Ile | Ile | Ser | Val | Tyr | Tyr | Ser | Leu | Ile |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Thr | Leu | Tyr | Lys | Ser | Thr | Leu | Asn | Ile | Pro | Thr | Glu | Glu | Gln |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ser | His | Ala | Arg | Lys | Gln | Ile | Glu | Ser | Arg | Lys | Arg | Ile | Ala | Arg | Thr |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Val | Leu | Val | Leu | Val | Ala | Leu | Phe | Ala | Leu | Cys | Trp | Leu | Pro | Asn | His |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Leu | Tyr | Leu | Tyr | His | Ser | Phe | Thr | Ser | Gln | Thr | Tyr | Val | Asp | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ser | Ala | Met | His | Phe | Ile | Phe | Thr | Ile | Phe | Ser | Arg | Val | Leu | Ala | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ser | Asn | Ser | Cys | | Asn | Pro | Phe | Ala | | Tyr | Trp | Leu | Ser | | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Phe | Gln | Lys | His | Phe | Lys | Ala | Gln | | Phe | Cys | Cys | Lys | | Glu | Gln |
| _ | | _ | 340 | | | | | 345 | | | | | 350 | | |
| Pro | Glu | Pro | Pro | Val | Ala | Asp | Thr | Ser | Leu | Thr | Thr | Leu | Ala | Val | Met |

21198P

 Gly Arg Val
 Pro Gly Thr Gly Ser Ile Gln Met Ser Glu Ile Ser Val

 370
 375
 380

 Thr Ser Phe Ser Gly Cys Ser Val Lys Gln Ala Glu Asp Arg Val

 385
 390
 395